

ABSTRACT

The present disclosure is related to bolometric infrared sensors having a two-layer structure and methods for manufacturing the same for improving an absorption rate by a spectroscopic design for resonantly absorbing infrared, and

5 preventing the deformation of a sensor caused by stresses due to heat. The infrared sensor including an ROIC substrate and several pixels, comprises: a bottom layer including a reflective metal layer on the ROIC substrate; a cavity for resonantly absorbing infrared ray over the bottom layer; an upper layer of a sandwich shape including an absorption-transmission layer having a cutting area

10 in the middle thereof and a bolometer layer placed both on and under the absorption-transmission layer; and anchors positioned at the edges of the pixel for supporting the upper layer and functioning as electrodes.